

Notice of Allowability	Application No.	Applicant(s)	
	10/018,032	YAMANAKA ET AL.	
	Examiner Thoi V Duong	Art Unit 2871	

-- **The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. This communication is responsive to the After-final Amendment filed 10/26/2004.
2. The allowed claim(s) is/are 4,5,9,14,15,19,40,41,45,53,54 and 58.
3. The drawings filed on 14 December 2001 are accepted by the Examiner.
4. Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some* c) None of the:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) hereto or 2) to Paper No./Mail Date _____.
 - (b) including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. Notice of References Cited (PTO-892)
2. Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____
4. Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. Notice of Informal Patent Application (PTO-152)
6. Interview Summary (PTO-413),
Paper No./Mail Date _____.
7. Examiner's Amendment/Comment
8. Examiner's Statement of Reasons for Allowance
9. Other _____.

DETAILED ACTION

1. This office action is in response to the Amendment filed October 26, 2004.

Accordingly, claims 4, 5, 9, 14, 15, 19, 40, 41, 45, 53, 54 and 58 were amended, and claims 1-3, 6-8, 10-13, 16-18, 20-39, 42-44, 46-52, 55-57 and 59-84 were cancelled. Currently, claims 4, 5, 9, 14, 15, 19, 40, 41, 45, 53, 54 and 58 are pending in this application.

Allowable Subject Matter

2. Claims 4, 5, 9, 14, 15, 19, 40, 41, 45, 53, 54 and 58 are allowed.

The following is an examiner's statement of reasons for allowance: none of the prior art of record fairly suggests or shows all of the limitations as claimed. Specifically,

Re claims 4, 14, 40 and 53, none of the prior art of record discloses, in combination with other limitations as claimed, the concave portions or the convex portions of the concave/convex shape being arranged such that a central angle made between a n-th concave/convex portion and a (n+1)-th concave/convex portion is a multiple of 137.5 degrees when the concave portions or the convex portions are numbered using n according to a distance from a center of the spiral.

Re claims 5, 9, 15, 19, 41, 45, 54 and 58, none of the prior art of record discloses, in combination with other limitations as claimed, the concave portions or the convex portions of the concave/convex shape being arranged such that a distance from a center of the spiral to a concave/convex portion is proportional to a square root of n when the concave portions or the convex portions are numbered using n according to the distance from the center of the spiral.

The most relevant reference, USPN 6,099,134 of Taniguchi et al., fails to disclose or suggest such arrangement of the concave/convex portions. As shown in Fig. 7, the reference of Taniguchi et al. only discloses a distribution state of the dots (or convex portions) having radii R according to the formula (1) in column 4, line 20, where the radial distribution function $g(R)$ is equivalent to the sum of the dot numbers normalized or standardized with the distances R (col. 4, lines 8-29).

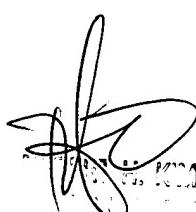
Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

3: Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thoi V. Duong whose telephone number is (571) 272-2292. The examiner can normally be reached on Monday-Friday from 8:30 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim, can be reached at (571) 272-2293.

Thoi Duong 
11/02/2004


ROBERT KIM
Supervisory Patent Examiner
TELEPHONE (571) 272-2293